This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of separating components of a fluid mixture, comprising the steps of:

providing a fluid mixture comprising a first component and a second component;

providing a sorbent structure comprising at least one sorbent;

sorbing said first component onto <u>or into</u> said sorbent;

desorbing said first component; and

electrokinetically biasing said first component in a direction other than the vector of said fluid mixture.

2-9. (Canceled)

10. (Original) A method according to claim 1, further comprising the step of:

collecting an exhaust fluid stream enriched in said second component and depleted in said first component.

11. (Currently Amended) A method according to claim 1, further comprising the step of:

collecting [[a]] heat of sorption generated by said ~~adsorbing~~ <u>sorbing</u> step.

12-15. (Canceled)

16. (Currently Amended) A method according to claim 1, further comprising the step of:

generating a plasma.

17-131. (Canceled)

132. (Currently Amended) A method of producing at least one reaction product, comprising the steps of:

providing a fluid mixture comprising a first component;

providing a sorbent structure comprising at least one sorbent and at least one catalyst;

~~adsorbing~~ sorbing said first component onto or into said ~~absorbent~~sorbent;

catalyzing a reaction of said ~~absorbed~~sorbed first component to form at least one ~~adsorbed~~sorbed reaction product;

desorbing said ~~adsorbed~~sorbed reaction product; and

electrokinetically biasing said desorbed reaction product in a direction other than the vector of said fluid mixture.

133-153. (Canceled)

154. (Currently Amended) A method of analyzing the components of a fluid mixture, comprising the steps of:

providing a fluid mixture comprising a first component and a second component;

providing[[a]] at least one sorbent structure comprising at least one sorbent;

sorbing said first component onto or into said sorbent;

desorbing said first component;

electrokinetically biasing said first component in a direction other than the vector of said fluid mixture; and

analyzing said desorbed first component.

155. (Currently Amended) A method of analyzing the components of a fluid mixture, comprising the steps of:

providing a fluid mixture comprising a first component and a second component;

providing[[a]] at least one sorbent structure comprising at least one sorbent;

sorbing said first component onto or into said sorbent;

desorbing said first component;

electrokinetically biasing said first component in a direction other than the vector of said fluid mixture;

collecting an exhaust fluid stream enriched in said second component and depleted in said first component; and

analyzing said exhaust fluid stream.

156-160. (Canceled)

161. (Currently Amended) A method of controlling temperature, comprising the steps of:

providing a fluid comprising a first component;

providing a sorbent structure comprising at least one sorbent in a container;

sorbing said first component onto or into said sorbent;

desorbing said first component;

electrokinetically biasing said first component and moving said first component in a direction other than the vector of said fluid;

condensing said first component;

evaporating said condensed first component; and

~~re-adsorbing~~ re-sorbing said evaporated first component onto or into said sorbent.

162. (Canceled)

163. (Canceled)

164. (Currently Amended) A method of controlling temperature according to claim 161, further comprising the step of:

applying an electromotive force to said condensed first component.

165. (Original) A sorption device, comprising:

a sorbent structure comprising at least one sorbent;

an electrokinetic biaser; and

a desorber.

166-178. (Canceled)

179. (Currently Amended) A sorption device according to claim 165, further comprising:

a source of a fluid mixture comprising at least a first component, and optionally a second component.

180. (Canceled)

181. (Currently Amended) A sorption device according to claim 179 ~~or claim 180~~, further comprising:

a collector of said first component.

182. (Original) A sorption device according to claim 181, further comprising:

a collector of an exhaust fluid stream enriched in said second component and depleted in said first component.

183. (Currently Amended) A ~~sorption device~~ method according to claim ~~181~~ 132, further comprising~~: a collector~~ the step of:

collecting said reaction product ~~component~~.

184. (Previously presented) A sorption device according to claim 165, further comprising:

a collector of an exhaust fluid stream depleted in said first component

185. (Canceled)

186. (Previously presented) A sorption device according to claim 165, further comprising:

a heat exchange medium.

187. (Canceled)

188. (Canceled)

189. (Original) A sorption device according to claim 186, further comprising:

a source to apply an electrohydrodynamic force to said heat exchange medium to increase liquid-to-liquid contact.

190. (Canceled)

191. (Previously presented) A sorption device according to claim 165, further comprising:

at least one electrohydrodynamic pump.

192-195. (Canceled)

196. (Previously presented) A sorption device according to claim 165, further comprising:

one or more channels through which said fluid mixture flows.

197-213. (Canceled)

214. (Previously presented) A sorption device according to claim 165, wherein said sorbent structure further comprises at least one high aspect ratio conductor.

215-224. (Canceled)

225. (Previously presented) A sorption device according to claim 165, further comprising:

at least one piezoelectric valve or pump.

226-245. (Canceled)

246. (Previously presented) A sorption device according to claim 165, further comprising:

at least one power conditioning device.

247. (Canceled)

248. (Canceled)

249. (Previously presented) A sorption device according to claim 165, further comprising:

at least one thermoelectric module.

250. (Currently Amended) A system, comprising:

at least one ~~adsorption~~ sorption device according to claim 165.

251-257. (Canceled)

258. (Original) A system according to claim 250, further comprising:

at least one analytical device.

259-268. (Canceled)

269. (Currently Amended) An inanimate organ for carrying out a bodily function in a patient in need thereof, comprising:

the sorption device according to claim 165;

wherein said bodily function is selected from the group consisting of:

removing toxins from blood;

removing toxins from respired air;

and combinations thereof[[;]].

270-337. (Canceled)

338. (Currently Amended) ~~An adsorption~~ A sorption device, comprising:

a first substrate layer;

an sorbent layer disposed adjacent to said first substrate layer;

at least two electrodes in contact with or in close proximity to at least one of said first substrate layer and said sorbent layer;

a second substrate layer disposed adjacent to said sorbent layer,

at least one via disposed through at least one of said first substrate layer, said sorbent layer, and said second substrate layer; said at least one via being disposed between said at least two electrodes; and

at least one collection port disposed through at least one of said first substrate layer, said sorbent layer, and said second substrate layer.

339. (Canceled)

340. (Original) A sorption device according to claim 338, further comprising:

at least one non-sorbent microstructure material within said sorbent layer.

341. (Currently Amended) A sorption device according to claim 338, further comprising:

at least one manifold wherein said manifold performs at least one function of removing ~~an adsorbed~~ a sorbed component, providing a feed stream, directing materials toward said sorption unit and directing material away from said sorption unit.

342. (Original) A sorption device according to claim 338, further comprising:

at least one of a coupled power source and a coupled multiphase signal generator.

343-374. (Canceled)

375. (Original) A sorption device, comprising:

a first substrate layer;

an sorbent layer disposed below the first substrate layer; at least two electrodes in contact with or in close proximity to at least one of said first substrate layer and said sorbent layer;

a second substrate layer disposed below said sorbent layer,

at least one via disposed through at least one of said first substrate layer, said sorbent layer and said second substrate layer, said at least one via being disposed between said at least two electrodes;

at least one collection port disposed through at least one of said first substrate layer, said sorbent layer and said second substrate layer;

a third substrate layer disposed over at least one of said first substrate layer and said sorbent layer; and

a working fluid;

wherein said first substrate layer, said sorbent layer and said second substrate layer are co-planar; and

wherein placement of said third substrate layer above said first substrate layer defines a chamber; and

wherein said working fluid is recycled within said sorption cell.

376. (Original) A sorption device according to claim 375, further comprising:
at least one non-sorbent microstructure material within said sorbent layer.

377. (Currently Amended) A sorption device according to claim 375, further comprising:

at least one manifold mechanism wherein said manifold mechanism performs at least one function of removing ~~an adsorbed~~ a sorbed material, providing a feed stream, directing materials toward said sorption unit and directing material away from said sorption unit.

378-401 (Canceled)

402. (Original) A sorption device according to claim 375, further comprising:

at least one power conditioning device.

403. (New) A system according to claim 250 wherein said system is selected from the group consisting of a vacuum pump, a foundry cold box, a dehydration device, a deodorizing device, an oxygen purifying device, a cooling device, a heating device, a refrigeration device, a heat pump device, a computer processing unit, a vehicle, a device for purifying air in the internal environment of a vehicle, a device for purifying water in the internal environment of a vehicle, a fuel reformer, a fuel purification device, a combustion device, a fuel cell, a device for purifying exhaust of a vehicle, a device for pollution abatement, a device for temperature conditioning spaces for human habitation, a device for temperature conditioning spaces for animal habitation, a device for temperature conditioning spaces for food storage, a concentrator for an analytical device, an analytical device, an oxygen source for coal conversion, an oxygen source for a power generation system, an oxygen source for a residential or institutional furnace, an oxygen source for a fuel cell, a cryo-cooling device, a temperature conditioning device, and a thermal management device for a laser.